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IDEA-2705-65
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16 JUL 1965

MEMORANDUM FOR: See Distribution

SUBJECT: U-2 Characteristics

1. When and if we purchase a new or improved U-2, our requirements should be stated in specific terms and as completely as possible. An initial list of desired characteristics of a new model U-2 is attached for your reference and comment.

2. Please examine these characteristics carefully and add whatever you think necessary and suggest changes or deletion of others. These complete data should be available for the meeting with Mr. Johnson which will take place Tuesday morning, 20 July 1965.

3. Please submit your comments in informal memoranda to Plans/FA/OSA.

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AD/FA/OSA

Attachment:
As stated

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Plans/FA/OSA/ (16 July 65)
Distribution:
#1 - D/FA/OSA
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#4 - C&FE/OSA
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DESIRED CHARACTERISTICS OF NEW MODEL U-2

The improved U-2 should be a subsonic, very high altitude reconnaissance weapon system. Systems and components should be integrated to provide the least possible gross weight at altitude, increased maneuverability at altitude, and a high rate of climb particularly in the 60 to 70 thousand foot range. It should have a standard basic configuration satisfactory to both the Agency and SAC.

a. Reach 70,000 feet in one hour or less from takeoff at maximum gross weight.

b. A range between 3,000 and 4,000 nautical miles at or above 70,000 feet.

c. Mid-range operational altitudes over denied territory [redacted]

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d. Increased maneuverability at altitude to increase the survivability margin against SAM defenses.

e. Integrated micro-miniaturized lightweight warning and defensive countermeasures systems.

f. High altitude engine relight capability and flameout prevention.

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[redacted]

i. Internal installation of all sensors and equipment except for quick attach/removal external fuel tanks. Drop tanks are desired.

j. Compatability with existing and planned sensor systems.

k. Structurally capable of adaptation to carrier operation. Modification for field installation of carrier arresting gear is desired.

[redacted]

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m. Removable wing leading edge to permit quick-change installation of wires, cabling, etc.

n. High mach (.9) wing.

o. Optional installation of two additional engines, probably J-85.

p. Incorporate a fuselage balance tank in which fuel would be used for center of gravity control instead of dead weight ballast.

q. Engine improvement to permit operation at approximately 665°C EGT.

r. Provide real-time read-out of selected inflight sensors.

s. AC electrical system.

t. A navigation system capable of positioning the U-2 accurately either at night or over an undercast. The proposed Doppler system and image intensifier may satisfy this requirement.

u. Cockpit re-design.

v. Improved life support and ejection system.

w. Aerodynamic surface controls to permit more stability at stall.